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L8: Entry 21 of 35

File: USPT

Nov 4, 1980

DOCUMENT-IDENTIFIER: US 4232152 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Amine salts of tertiary amino acids

Brief Summary Text (31):

Examples of amine salts of Mannich type adducts include: bis-tri-n-propanolamine salt of bis(hydroxyethylamino) methyl malonic acid, diethanolamine salt of hydroxyethylamino methyl malonic acid, monomethylamine salt of bis(hydroxyethylamino) furfuryl malonic acid, bis-triethylenediamine salt of bis(hydroxyethylamino) benzyl malonic acid, bis-triethylenediamine salt of morpholino benzyl malonic acid, bis-dimethylamine salt of morpholine methyl malonic acid, methylamine salt of bis(piperidinylmethyl) acetic acid, bis-tri-n-propanolamine salt of diglycolamino methyl malonic acid, propanolamine salt of bis(piperidinylmethyl) acetic acid, triethanolamine salt of bis(imidazolo methyl) acetic acid, bis-trimethylamine salt of piperidinyl methyl malonic acid and triethylenediamine salt of morpholino benzyl cyanoacetic acid.

Detailed Description Text (10):

Approximately 100 cc of methanol, 0.1 mols of malonic acid, 0.1 mols of diethanolamine, and 0.1 mols of furfuraldehyde were charged to a round bottom flask. The contents were refluxed for two hours, and then the methanol removed by evacuation. The product obtained was bis-(hydroxyethyl) furfuryl malonic acid.

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## Refine Search

### Search Results -

Terms	Documents
(malonate or malonic) adj5 (amine adj2 salt)	3

Database:

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search:

Refine Search

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### Search History

 DATE: Tuesday, September 13, 2005   [Printable Copy](#)   [Create Case](#)

<u>Set</u> <u>Name</u>	<u>Query</u>	<u>Hit</u> <u>Count</u>	<u>Set</u> <u>Name</u> result set
side by side			
DB=USPT,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR			
<u>L10</u>	(malonate or malonic) adj5 (amine adj2 salt)	3	<u>L10</u>
<u>L9</u>	L8 and (cosmetic or sunscreen)	1	<u>L9</u>
<u>L8</u>	(malonate or malonic) adj5 (polyethyleneimine or \$ethanolamine or propanolamine or methylamine or ehtylamine or propylamine or isopropylamine or butylamine or pentylamine or hexylamine)	35	<u>L8</u>
<u>L7</u>	L4 and 424/\$.ccls.	2	<u>L7</u>
<u>L6</u>	L4 and cosmetic\$	3	<u>L6</u>
<u>L5</u>	L4 and sunscreen	0	<u>L5</u>
<u>L4</u>	(malonate or malonic) adj5 \$amine	167	<u>L4</u>
<u>L3</u>	(malonate or malonic) adj3 (salt) same sunscreen	1	<u>L3</u>
<u>L2</u>	L1 and \$butyl\$methoxydibenzoylmethane	10	<u>L2</u>
<u>L1</u>	(malonate or malonic) same sunscreen	35	<u>L1</u>

## Refine Search

### Search Results -

Terms	Documents
(malonate or malonic) adj3 (salt) same sunscreen	1

Database:

US Pre-Grant Publication Full-Text Database  
US Patents Full-Text Database  
US OCR Full-Text Database  
EPO Abstracts Database  
JPO Abstracts Database  
Derwent World Patents Index  
IBM Technical Disclosure Bulletins

Search:

L3

Refine Search

Recall Text

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Interrupt

### Search History

DATE: Tuesday, September 13, 2005 [Printable Copy](#) [Create Case](#)**Set Name Query**

side by side

**Hit Count Set Name**

result set

*DB=USPT,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR*

<u>L3</u>	(malonate or malonic) adj3 (salt) same sunscreen	1	<u>L3</u>
<u>L2</u>	L1 and \$butyl\$methoxydibenzoylmethane	10	<u>L2</u>
<u>L1</u>	(malonate or malonic) same sunscreen	35	<u>L1</u>

END OF SEARCH HISTORY

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L2: Entry 6 of 10

File: USPT

May 1, 2001

DOCUMENT-IDENTIFIER: US 6224854 B1

**\*\* See image for Certificate of Correction \*\***

TITLE: UV protection compositions

Brief Summary Text (6):

Many conventional sunscreen products, in particular, are deficient, however, due to their inability to provide efficacious protection against broad spectrum UV radiation, i.e., protection against both UVB and UVA radiation. Today, most commercially available sunscreen products are efficient at absorbing UV radiation in the 290 nm to 320 nm UVB region such that sunburn of the skin is prevented. They are less efficient when it comes to absorbing light which falls in the 320 nm to 400 nm UVA region, which leaves the skin vulnerable to premature skin aging. This deficiency is due in part to the limited number of UVA absorbing sunscreen actives which are both commercially available and approved for global use. One class of these sunscreen actives includes dibenzoylmethane compounds which provide broad spectrum UV protection and 4-tert-butyl-4'-methoxydibenzoylmethane, in particular, is also approved for global use. Unfortunately, these sunscreens tend to photodegrade upon exposure to UV radiation thereby reducing their UVA efficacy. Consequently, sunscreen products which include these compounds are typically more difficult to formulate due to the inherent lack of photostability of dibenzoylmethane compounds. One approach to stabilize these types of sunscreens is described in U.S. Ser. No. 07/929,612, Deckner, filed Aug. 13, 1992, involving the use of benzylidene camphor sunscreens to stabilize the dibenzoylmethane compound. Such compositions, however, are not currently approved for global use on humans.

Brief Summary Text (31):

Suitable UVA-absorbing dibenzoylmethane sunscreen actives include, but are not limited to, those selected from the group consisting of 2-methyldibenzoylmethane, 4-methyldibenzoylmethane, 4-isopropyldibenzoylmethane, 4-tert-butyldibenzoylmethane, 2,4-dimethyldibenzoylmethane, 2,5-dimethyldibenzoylmethane, 4,4'-diisopropylbenzoylmethane, 4-tert-butyl-4'-methoxydibenzoylmethane, 2-methyl-5-isopropyl-4'-methoxydibenzoylmethane, 2-methyl-5-tert-butyl-4'-methoxydibenzoylmethane, 2,4-dimethyl-4'-methoxydibenzoylmethane, 2,6-dimethyl-4'-tert-butyl-4'-methoxydibenzoylmethane, and mixtures thereof. Preferred UVA-absorbing dibenzoylmethane sunscreen actives include those selected from the group consisting of 4-tert-butyl-4'-methoxydibenzoylmethane, isopropyldibenzoylmethane, and mixtures thereof. A more preferred UVA-absorbing dibenzoylmethane sunscreen active is 4-tert-butyl-4'-methoxydibenzoylmethane.

Brief Summary Text (32):

The sunscreen active, 4-tert-butyl-4'-methoxydibenzoylmethane, which is also known as butyl methoxydibenzoylmethane or Avobenzone, is commercially available under the names Parsol.RTM. 1789 from Givaudan-Roure (International) S.A. (Basel, Switzerland) and Eusolex.RTM. 9020 from Merck & Co., Inc. (Whitehouse Station, N.J.). The sunscreen 4-isopropyldibenzoylmethane, which is also known as isopropyl dibenzoylmethane, is commercially available from Merck under the name Eusolex 8020.

CLAIMS:

7. The composition of claim 1 wherein the UVA-absorbing dibenzoylmethane sunscreen active is selected from the group consisting of 2-methyldibenzoylmethane, 4-methyldibenzoylmethane, 4-isopropyldibenzoylmethane, 4-tert-butyldibenzoylmethane, 2,4-dimethyldibenzoylmethane, 2, 5-dimethyldibenzoylmethane, 4,4'-diisopropylbenzoylmethane, 4-tert-butyl-4'-5 methoxydibenzoylmethane, 2-methyl-5-isopropyl-4'-methoxydibenzoylmethane, 2-methyl-5-tert-butyl-4'-methoxydibenzoylmethane, 2,4-dimethyl-4'-methoxydibenzoylmethane, 2, 6-dimethyl-4'tert-butyl-4'methoxydibenzoylmethane, and mixtures thereof.

8. The composition of claim 1 wherein the UVA-absorbing dibenzoylmethane sunscreen active is selected from the group consisting of 4-tert-butyl-4'-methoxydibenzoylmethane, isopropyldibenzoylmethane, and mixtures thereof.

9. The composition of claim 1 wherein the UVA-absorbing dibenzoylmethane sunscreen active is 4-tert-butyl-4'-methoxydibenzoylmethane.

14. The composition of claim 13 wherein the composition comprises from about 0.01% to about 30%, by weight of the composition, of the UVA-absorbing dibenzoylmethane sunscreen active and wherein the styrene derivative is selected from the group consisting of e-stilbene, z-stilbene, benzylidene malonitrile, ethyl-4-nitrocinnamate, diethyl benzalmalonate, dimethyl-4-nitrobenzylidene malonate, and mixtures thereof.

15. The composition of claim 14 wherein the UVA-absorbing dibenzoylmethane sunscreen active is selected from the group consisting of 2-methyldibenzoylmethane, 4-methyldibenzoylmethane, 4-isopropyldibenzoylmethane, 4-tert-butyldibenzoylmethane, 2,4-dimethyldibenzoylmethane, 2, 5-dimethyldibenzoylmethane, 4,4'-diisopropylbenzoylmethane, 4-tert-butyl-4'-methoxydibenzoylmethane, 2-methyl-5-isopropyl-4'-methoxydibenzoylmethane, 2-methyl-5-tert-butyl-4'-methoxydibenzoylmethane, 2,4-dimethyl-4'-methoxydibenzoylmethane, 2, 6-dimethyl-4'tert-butyl-4'methoxydibenzoylmethane, and mixtures thereof.

19. The composition of claim 18 wherein the UVA-absorbing dibenzoylmethane sunscreen active is selected from the group consisting of 4-tert-butyl-4'-methoxydibenzoylmethane, isopropyldibenzoylmethane, and mixtures thereof.

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L2: Entry 8 of 10

File: USPT

Mar 15, 1988

DOCUMENT-IDENTIFIER: US 4731242 A

TITLE: Waterproof sunscreen compositions

Brief Summary Text (33):

Polyamide useful in forming the long lasting sunscreen composition of this invention may be polymers formed from the reaction of polyamines with a polybasic acid. Methods of preparing these polyamides by condensation of polyamines and polycarboxylic acids or anhydrides are well known in the art and need not be described here. The polyamides may be derived from such polyamines as ethylenediamine, diethylene-triamine, triethylenetetramine, tetraethylenepentamine, propylenediamine, 1,4-diaminobutane, 1,3-diaminobutane, hexamethylenediamine, 3,3-iminobispropylamine and the like. Typical polycarboxylic acids which may be condensed with the polyamines to form the desired polyamide are oxalic, malonic, succinic, glutaric, adipic, palmitic, suberic, azelaic, sebacic, malic, phthalic, cyclohexandicarboxylic, and the like as well as their isomers, homologs and anhydrides. Alternately, or in addition to the above polycarboxylic acids, the polyamide may be formed from unsaturated polycarboxylic acids or anhydrides such as maleic, fumaric, citraconic and itaconic acids and the like.

Brief Summary Text (36):

Any active sunscreen agent, capable of absorbing the harmful effects of ultraviolet radiation which, in non-irritating, non-toxic and is compatible with the ingredients used in the composition and which when applied to the skin are homogeneously dispersed throughout the film formed by the polyamide resin polymer, can be used. Active sunscreen agents that met these criteria are: PABA (para-aminobenzoic acid); Cinoxate (2-ethoxyethyl p-methoxycinnamate); diethanolamine p-methoxycinnamate; digalloyl trioleate; Dioxybenzone (2,2'-dihydroxy-4-methoxybenzophenone); ethyl 4-[bis(hydroxypropyl)]-aminobenzoate; 2-ethylhexyl 2-cyano-3,3-diphenylacrylate; ethylhexyl p-methoxycinnamate; 2-ethylhexyl salicylate; glyceryl aminobenzoate; Homosalate (3,3,5-trimethylcyclohexyl salicylate); Menthyl Anthranilate (menthyl o-aminobenzoate); Oxybenzone (2-hydroxy-4-methoxybenzophenone); Padimate A (amyl p-dimethylaminobenzoate); 2-phenylbenzimidazole-5-sulfonic acid; Sulisonbenzone (5-benzoyl-4-hydroxy-2-methoxybenzenesulfonic acid); triethanolamine salicylate; 4-Tert. butyl-4-methoxydibenzoylmethane; and benzalphthalide.

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**Search Results - Record(s) 1 through 10 of 10 returned.**☐ 1. Document ID: US 6926887 B2**Using default format because multiple data bases are involved.**

L2: Entry 1 of 10

File: USPT

Aug 9, 2005

US-PAT-NO: 6926887

DOCUMENT-IDENTIFIER: US 6926887 B2

TITLE: Photostabilizers, UV absorbers, and methods of photostabilizing a sunscreen composition

DATE-ISSUED: August 9, 2005

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bonda; Craig A.	Winfield	IL		
Pavlovic; Anna B.	Elmwood Park	IL		

US-CL-CURRENT: 424/60; 424/59, 558/400, 560/81

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	Publ	Draw
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☐ 2. Document ID: US 6919473 B2

L2: Entry 2 of 10

File: USPT

Jul 19, 2005

US-PAT-NO: 6919473

DOCUMENT-IDENTIFIER: US 6919473 B2

TITLE: Photostabilizers, UV absorbers, and methods of photostabilizing a sunscreen composition

DATE-ISSUED: July 19, 2005

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bonda; Craig A.	Winfield	IL		
Pavlovic; Anna B.	Elmwood Park	IL		

US-CL-CURRENT: 560/8; 560/19

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	Publ	Draw
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☐ 3. Document ID: US 6800274 B2

L2: Entry 3 of 10

File: USPT

Oct 5, 2004

US-PAT-NO: 6800274

DOCUMENT-IDENTIFIER: US 6800274 B2

**\*\* See image for Certificate of Correction \*\***

TITLE: Photostabilizers, UV absorbers, and methods of photostabilizing a sunscreen composition

DATE-ISSUED: October 5, 2004

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bonda; Craig A.	Winfield	IL		
Pavlovic; Anna B.	Elmwood Park	IL		
Shah; Urvil B.	Mokena	IL		

US-CL-CURRENT: 424/60; 424/59, 558/400, 560/81

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	Index	Drawings
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☐ 4. Document ID: US 6488915 B1

L2: Entry 4 of 10

File: USPT

Dec 3, 2002

US-PAT-NO: 6488915

DOCUMENT-IDENTIFIER: US 6488915 B1

**\*\* See image for Certificate of Correction \*\***TITLE: Use of sunscreen combinations which comprise, as essential constituent, 2-(4-alkoxyanilinomethylene) malonic dialkyl esters as photostable UV filters in cosmetic and pharmaceutical preparations

DATE-ISSUED: December 3, 2002

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Heidenfelder; Thomas	Romerberg-Mechtersheim			DE
Tiefensee; Kristin	Bad Duerkheim			DE
Wunsch; Thomas	Speyer			DE

US-CL-CURRENT: 424/59; 424/400, 424/401, 424/60

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	Index	Drawings
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☐ 5. Document ID: US 6290938 B1



L2: Entry 5 of 10

File: USPT

Sep 18, 2001

US-PAT-NO: 6290938

DOCUMENT-IDENTIFIER: US 6290938 B1

TITLE: Sunscreen compositions

DATE-ISSUED: September 18, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Tanner; Paul Robert	Maineville	OH		
Irwin; Christopher	Cincinnati	OH		
O'Donoghue; Margaret Ann	Monroe	OH		

US-CL-CURRENT: 424/59; 424/400, 424/401, 424/60

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	Index	Drawings
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☐ 6. Document ID: US 6224854 B1

L2: Entry 6 of 10

File: USPT

May 1, 2001

US-PAT-NO: 6224854

DOCUMENT-IDENTIFIER: US 6224854 B1

**\*\* See image for Certificate of Correction \*\***

TITLE: UV protection compositions

DATE-ISSUED: May 1, 2001

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Robinson; Larry Richard	Loveland	OH		

US-CL-CURRENT: 424/59; 424/400, 424/401, 424/60

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	Index	Drawings
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☐ 7. Document ID: US 6132703 A

L2: Entry 7 of 10

File: USPT

Oct 17, 2000

US-PAT-NO: 6132703

DOCUMENT-IDENTIFIER: US 6132703 A

**\*\* See image for Certificate of Correction \*\***

TITLE: Cosmetic and pharmaceutical preparations containing photostable UV filters

DATE-ISSUED: October 17, 2000

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Habeck; Thorsten	Meckenheim			DE
Krause; Alfred	Speyer			DE

US-CL-CURRENT: 424/59; 424/400, 424/401, 424/60

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	FIGS	Drawings
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☐ 8. Document ID: US 4731242 A

L2: Entry 8 of 10

File: USPT

Mar 15, 1988

US-PAT-NO: 4731242

DOCUMENT-IDENTIFIER: US 4731242 A

TITLE: Waterproof sunscreen compositions

DATE-ISSUED: March 15, 1988

## INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Palinczar; Victor	Trenton	NJ	08611	

US-CL-CURRENT: 424/59; 424/60

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	FIGS	Drawings
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☐ 9. Document ID: WO 3099250 A1

L2: Entry 9 of 10

File: EPAB

Dec 4, 2003

PUB-NO: WO003099250A1

DOCUMENT-IDENTIFIER: WO 3099250 A1

TITLE: SUNSCREEN COSMETIC COMPOSITIONS STORAGE STABILIZED WITH MALONATE SALTS

PUBN-DATE: December 4, 2003

## INVENTOR-INFORMATION:

NAME	COUNTRY
ZHANG, JOANNA HONG	
FARYNIARZ, JOSEPH RAYMOND	
CHENEY, MICHAEL CHARLES	

INT-CL (IPC): A61 K 7/44

EUR-CL (EPC): A61K008/02; A61K008/04, A61K008/35, A61K008/362, A61K008/41, A61K008/41, A61Q001/02, A61Q001/12, A61Q017/04, A61Q019/00, A61Q019/08, A61Q019/10

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	FIGS	Drawings
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☐ 10. Document ID: US 6926887 B2, US 20040057912 A1, AU 2003275192 A1, EP 1539064 A2

L2: Entry 10 of 10

File: DWPI

Aug 9, 2005

DERWENT-ACC-NO: 2004-327667

DERWENT-WEEK: 200552

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TITLE: Composition useful as sunscreen for protecting human skin from ultraviolet radiation comprises a photoactive compound and (new) fluorene derivative containing diesters or polyesters of diphenylmethylene malonic acid

INVENTOR: BONDA, C A; PAVLOVIC, A ; SHAH, U B ; PAVLOVIC, A B

PRIORITY-DATA: 2002US-0246434 (September 17, 2002), 2002US-0302423 (November 22, 2002)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>US 6926887 B2</u>	August 9, 2005		000	A61K007/64
<u>US 20040057912 A1</u>	March 25, 2004		027	A61K007/42
<u>AU 2003275192 A1</u>	April 8, 2004		000	A61F007/00
<u>EP 1539064 A2</u>	June 15, 2005	E	000	A61F007/00

INT-CL (IPC): A61 F 7/00; A61 K 7/42; A61 K 7/64; C08 F 12/32; C08 F 32/04; C08 F 112/32; C08 F 212/32; C08 K 5/092; C08 K 5/12; C08 K 5/315; C08 L 45/00; C08 L 67/02; C08 L 73/02

Full	Title	Citation	Front	Review	Classification	Date	Reference			Claims	INDEX	Drawings
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Terms	Documents
L1 and \$butyl\$methoxydibenzoylmethane	10

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